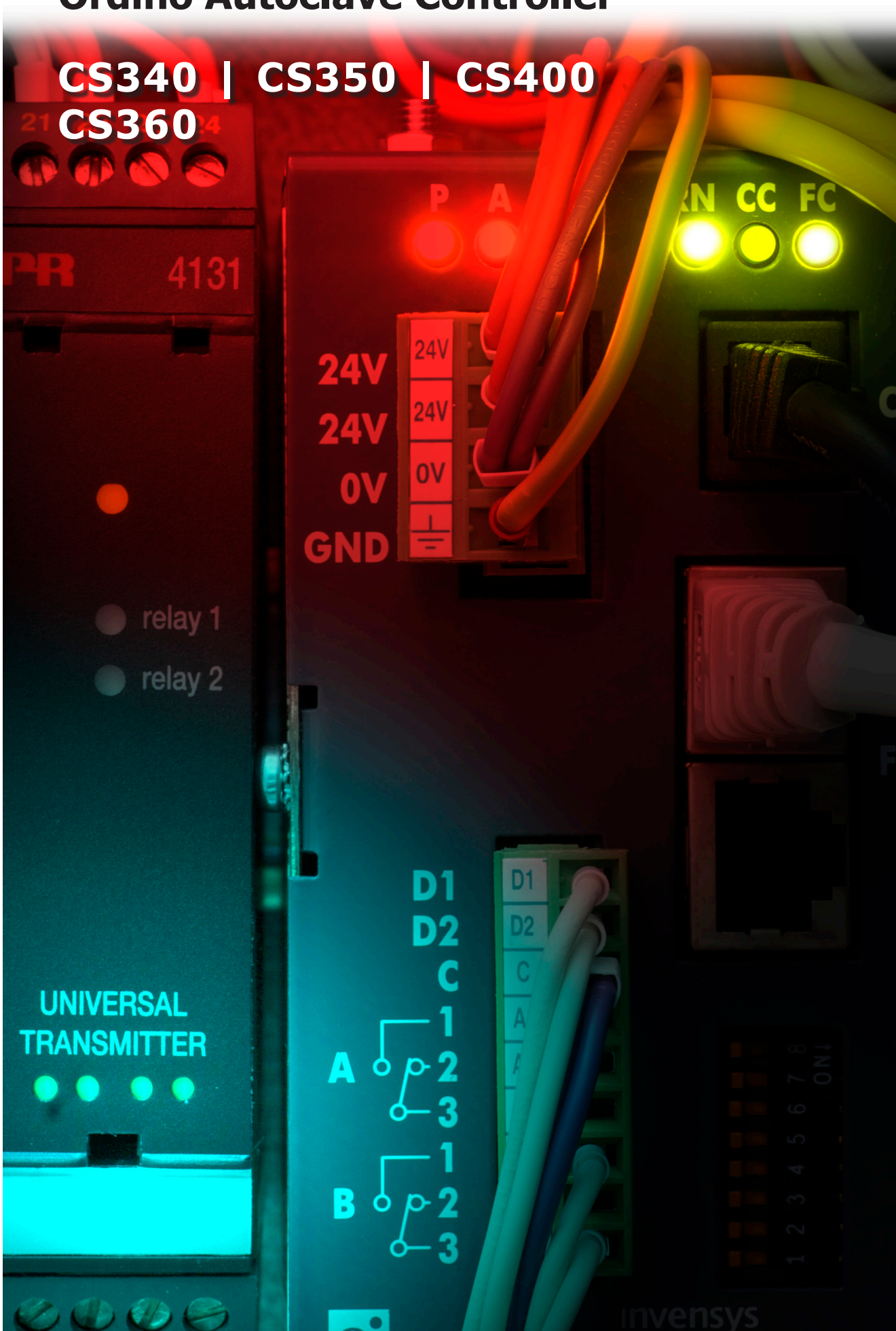
Ordino Autoclave Controller

CS340 | CS350 | CS400
CS360



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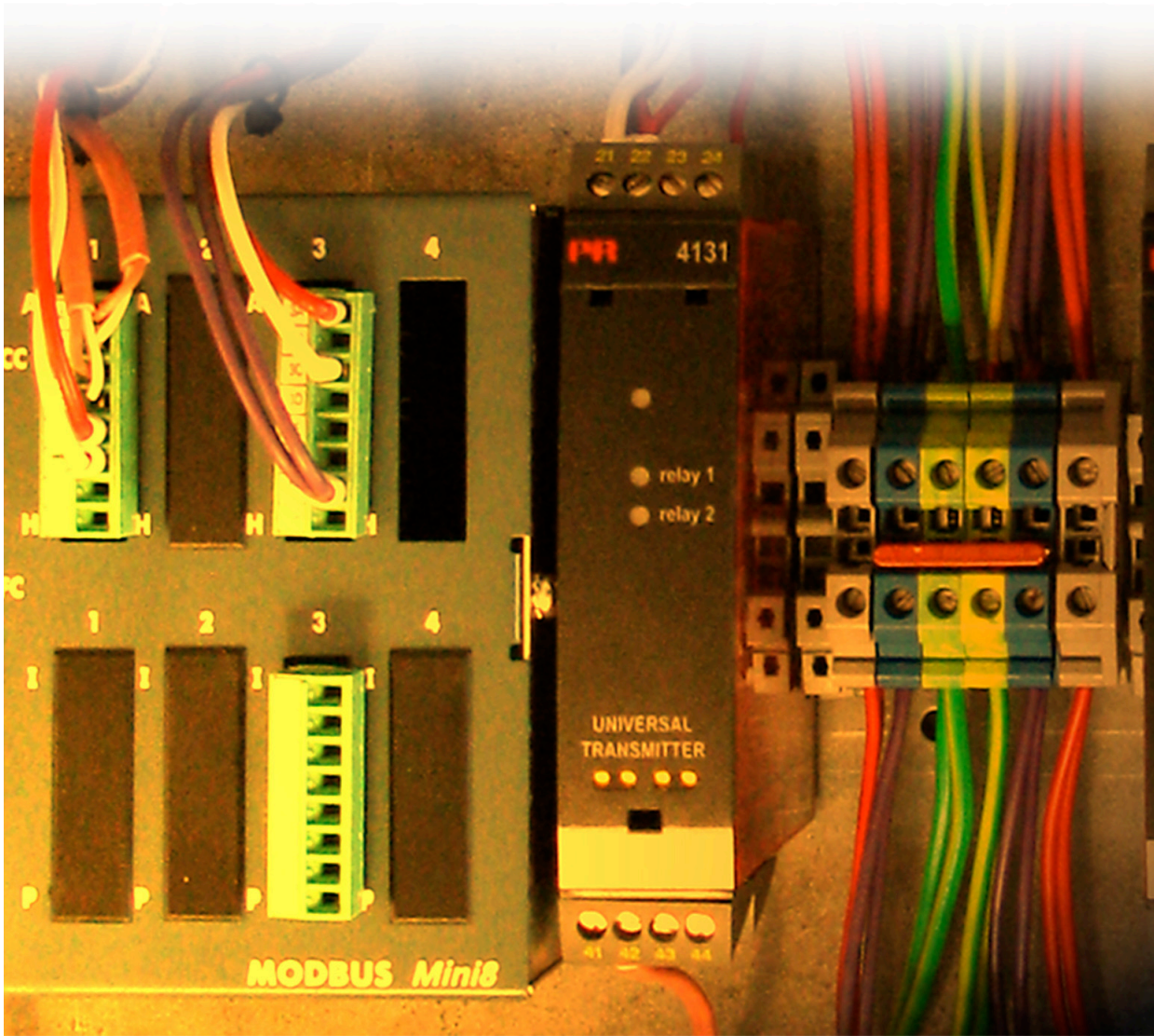
Ordino Autoclave Controller

The Ordino CS range controllers have been developed specifically for Premex autoclaves. With a wide range of advanced properties and extra features they fit perfectly for the control of your Premex autoclaves and small reactor units. These solutions excel in flexibility and advanced control by the use of high quality components. Premex has recognized the demands of their customers to increase the functionality of their autoclaves with a wide range of 3rd party instruments; therefore we offer several options to integrate in the system. The long term partnership between Pro Control and Premex has resulted in an outstanding concept and optimized controllability of the autoclaves.

While each autoclave type has its own characteristics, a number of Ordino types are available,

- **CS340** Basic control solution for a standard autoclave
- **CS350** Medium control solution with higher power requirements and more options available
- **CS400** Control solution for four basic autoclaves integrated in one system.
- **CS360** Unlimited control solution, specifications can be sent at request

In case questions might occur, please contact us for additional information.



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Ordino CS340

The CS340 is our basic control system for a Premex autoclave. This cabinet is developed for the standard Andorra and Avalon autoclaves but fits also for other Premex Standard autoclaves with a heating power up to 2000 Watt.

The autoclave is controlled by a PC with dedicated control software. Optionally a touch panel can be integrated into the control system.
The CS340 can be offered as a basic autoclave controller and with a number of options.

Standard specifications

- Ideal for small Premex autoclaves.
- Power supply 230 VAC / 10 Amp.
- No control functions at the front. Delivery is inclusive our PC control software, a color touch screen is available (optionally)
- Dimensions, BxHxD 341,9 mm x 132,5 mm x 305 mm.
- Master/slave - heat/cool temperature controller (max. 2000 W)
- Jacket and medium measurements by type "K" thermocouples.
- Stirrer speed control, rotation speed read back is optionally available.
- An accurate process controller is used for measurements and control.
- Alarms on:
  – medium temperature
  – jacket temperature (independent from controller)
  – pressure (optional)
- Binary input contact for external alarms
- Operator control environment at a PC and/or a touch panel:
  – On/off heater and stirrer
  – Measuring and controlling temperature and stirrer
  – Alarm management
  – Fast cooling
  – Trending (PC only)
- Additional features are available. (See next page.)

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Ordering and additional features Ordino CS340

CS340-Basic	Ordino with Maxon stirrer Basic control package Temperature control Medium and jacket temperature measurement Separate jacket monitoring alarm 2m cables
CS340-AK	Ordino with 3 Phase 230 Vac motor drive The functionality is the same as the CS340-Basic
OP-611	Color Touch Panel
CS350-2	Realtime Stirrer measurement
CS350-3	Advanced Operator System, inclusive PC or laptop. **Extra's are:** • Historical trending • Temperature programmer, 16 segments • Reporting
CS350-25	Internet service Remote service for on line help and free upgrades.
CS350-26	Stirrer alarm at a blocked stirrer With processes where the medium might become solid the stirrer will be blocked. This system will switch off the stirrer.
CS350-20	Extra input For example for an extra pressure or temperature measurement
CS350-27	Extra cable length (5 meters extra)
CS350-28	Binary input contact for external alarms
CS350-29	Other thermocouple types (Type N or PT100)

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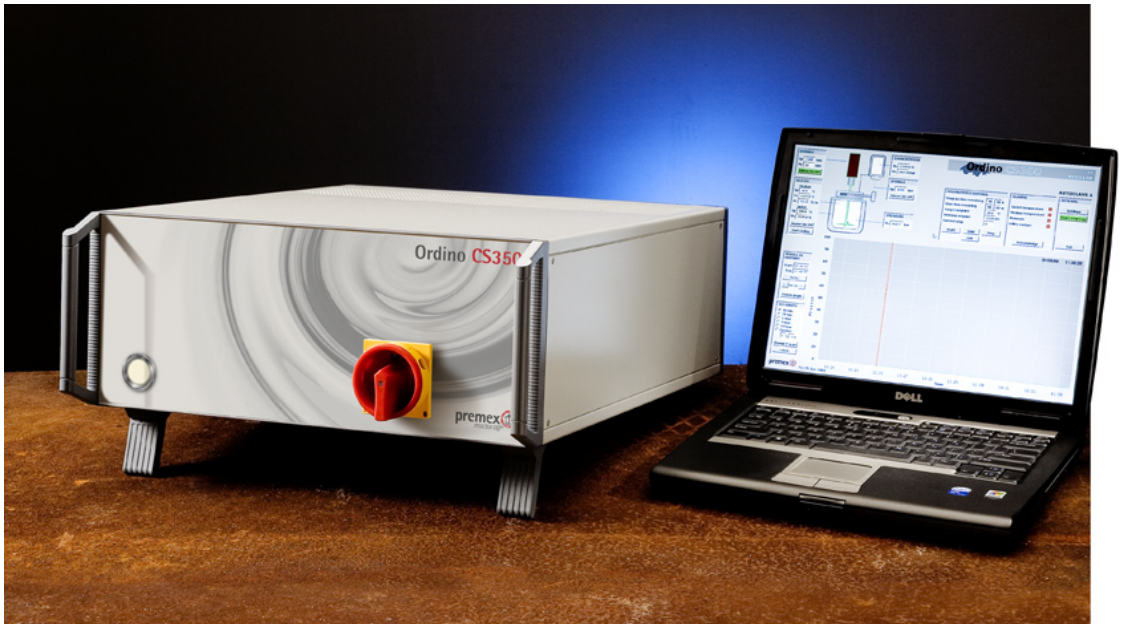
Ordino CS350



This Ordino controller is the more advanced version of the CS340 controller.
The components used for this cabinet are the same as used in the CS340 but with this cabinet more options are available for extra features and a higher heating power can be delivered. You can control the autoclave from a PC with our dedicated control software.
A touch panel is also available and can be integrated in the front panel.

Standard specifications

- Fit for purpose for standard Premex autoclaves.
- Power supply 230 Vac / 20 Amp.
- No control functions at the front. Delivery is inclusive our PC control software, a color touch screen is available (optionally)
- Dimensions, BxHxD 448,6 mm x 177 mm x 500 mm.
- Master/slave - heat/cool temperature controller (max. 3.500 W)
- Jacket and medium measurements by type "K" thermocouples.
- Stirrer speed control, rotation speed read back optionally available.
- An accurate process controller for measurements, control.
- Alarms on:
  – medium temperature
  – jacket temperature (independent from controller)
  – pressure (optional)
- Binary input contact for external alarms
- Operator control environment for the PC and/or Touch panel:
  – On/off heater and stirrer
  – Measuring and controlling temperature and stirrer
  – Alarm management
  – Fast cooling
  – Trending (PC only)
- A wide range of additional features are available. (See next page.)

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Ordering and additional features for the Ordino CS350

This Ordino controller can be ordered with a wide range of options. Please be aware that the number of options might be limited by the physical limitations of the used cabinet. We will assist you with the selection of your wishes.

CS350-Basic	The standard autoclave controller **Basic control package** – Temperature control – Medium and jacket temperature measurement – Separate jacket monitoring alarm – 2m cables
CS351-Huber	The heater is provided by a Huber thermostat or chiller.
OP-611	Color Touch Panel
CS350-2	Realtime Stirrer measurement
CS350-3	Advanced Operator System, inclusive PC or laptop. **Extra's are:** • Historical trending • Temperature programmer, 16 segments • Reporting
CS350-15	Extra power in the autoclave The heating power of the autoclave is increased up to to 10 KW
CS350-20	Extra input For example for an extra pressure or temperature measurement
CS350-21	pH measurement. Inclusive installation in the frontpanel of a
	96 x 96 mm pH Controller
CS350-22	Mass flow control with shut down valve A Bronkhorst or Brooks mass flow controller will be integrated; the shut down valve is used for a safe shut down of the connected gas supply
CS350-23	Mass flow control with shut down valve The same as option CS350-22 but with a pressure controller in order to control the pressure
CS350-24	Extra Heating system For instance for a lid heater or tracing. In this option a separate thermocouple is connected for a safe shut down at high temperatures
CS350-25	Internet service Remote service for on line help and free upgrades.
CS350-26	Stirrer alarm at a blocked stirrer With processes where the medium might become solid the stirrer will be blocked. This system will switch off the stirrer.
CS350-27	Extra cable length (5 metres extra)
CS350-28	Extra input contact for switching off the autoclave This option can be used for example fume hood alarms
CS350-29	Other thermocouple types (Type N or PT100)
CS350-30	Second cooling valve

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Ordino CS400

The Ordino CS400 is specifically developed for the Premex Avalon reactor unit.
Regarding the functionality for each reactor the CS400 is highly comparable with the Ordino CS340.
With this set of cabinets four autoclaves are controlled independently. You can control all the autoclaves from the or with a touch panel. The control software is extended with an overview page, to monitor all autoclaves together in one view.

Standard specifications

- Specifically build for the Premex Avalon autoclaves or four small Premex autoclaves.
- Power supply 230 VAC / 16 Amp.
- No control functions at the front. Delivery is inclusive a PC with our control software A color touch screen is available (Optionally)
- Two cabinets. The dimensions for each cabinet are, BxHxD 448,6 x 177 x 500 mm.
- Master/slave - heat/cool temperature controller (max. 750 W)
- Jacket and medium measurements by type "K" thermocouples.
- Stirrer speed control, rotation speed read back.
- Four accurate process controllers for measurements, control.
- Alarms on:
  – medium temperature
  – jacket temperature (independent from controller)
  – pressure (optional)
- Binary input contact for external alarms
- Operator control environment at a PC and/or Touch panel:
  – On/off heater and stirrer
  – Measuring and controlling temperature and stirrer
  – Alarm management
  – Fast cooling
  – Trending (PC only)
- Additional features are available. (See next page.)

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Ordering and additional features for the Ordino CS400
This Ordino controller can be ordered with a number of options.

Ordino CS400	Four Andorra autoclaves controlled with CS340, build in two cabinets. **Included are:** • Full software version with PC included • Historical trending • Temperature programmer, 16 segments • Reporting • Temperature control • Medium and jacket temperature measurement • Separate jacket monitoring alarm • 2m cables • Realtime stirrer and Pressure measurement • Installed and tested at the PC • Cabling
CS400-01	Color Touch Panel
CS400-20	Extra inputs For example for extra pressure or temperature measurements
CS400-25	Internet service Remote service for on line help and free upgrades. Twelve months valid
CS400-27	Extra cable length (5 meters extra)
CS400-28	Extra input contact for switching off the autoclave This option can be used for example fume hood alarms
CS400-29	Other thermocouple types (Type N or PT100)

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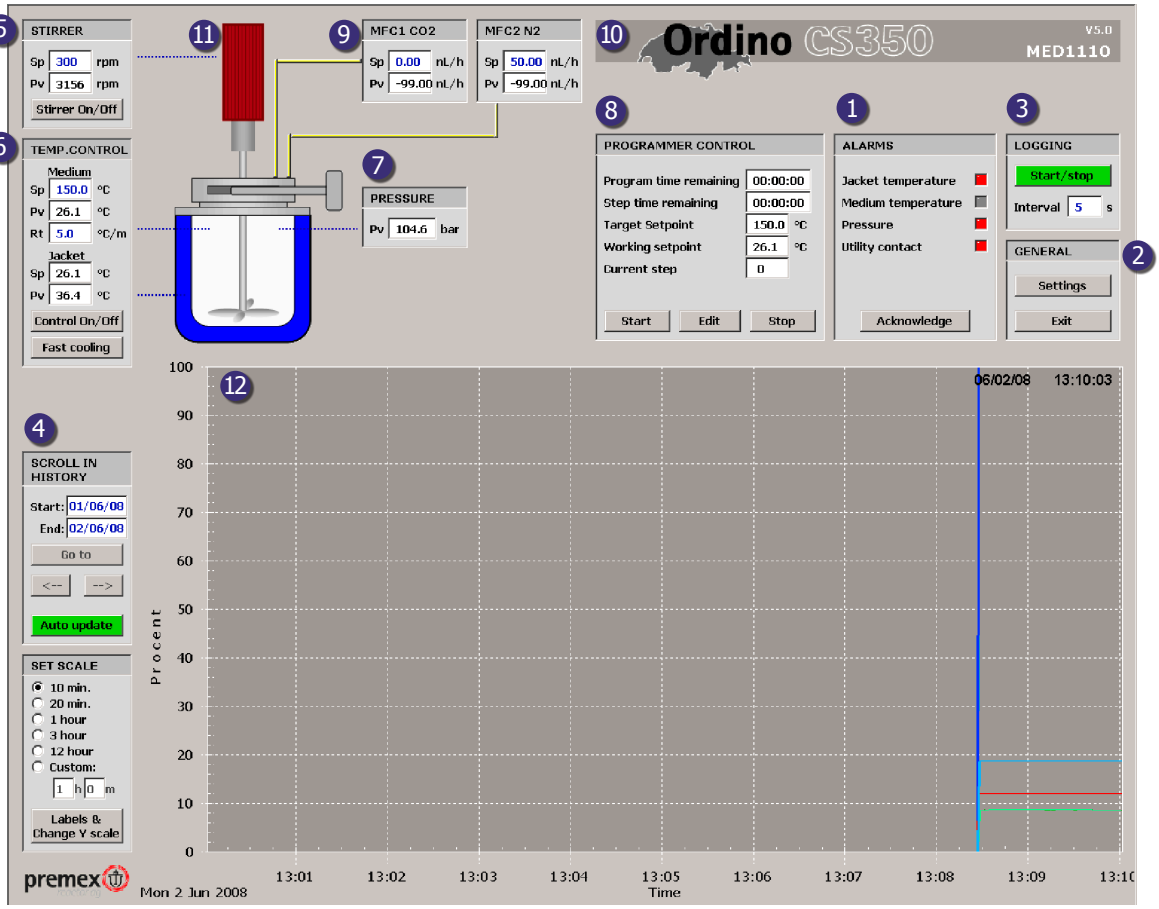
Control environment



The cabinets are connected to the computer. For the controls a specific operator environment is developed. In order to give you an idea of the look and feel of this environment, the main page is displayed.

For a more detailed description the user manual can be send at request.

No.	Element description
1	Alarms
2	General functions such as PID settings and alarm settings
3	Logging control (Optionally)
4	Trending control
5	Stirrer control
6	Temperature control
7	Pressure indicator (Optionally)
8	Temperature programmer (Optionally)
9	Mass flow controller (Optionally)
10	Banner with project related information

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Volume 109, NL 1446 WH Purmerend T +31 (0)299 63 06 90, F +31 (0)299 63 06 99
E info@pro-control.nl www.pro-control.nl